Remarks/Arguments:

In response to the Office Action, the applicants offer the following remarks. In summary, claims 1-54 are pending in the application. The Office Action allowed claims 13, 16-23, 27-33, and 36-48. Claims 1-4, 6, 11, 14, 15, 24-26, and 49-54 were rejected. The Office Action objected to claims 5, 7-10, 12, and 35. The rejections and objections will be addressed below in the order presented by the Office Action.

A. Objection to Claim 35

The Office Action objects to claim 35 due to an informality, namely that the term "tetrachloro" is missing after the recitation 4,6,1',6'-. The applicants understand the Office Action to mean that "chloro" is missing, because "tetra" is already present, and have amended claim 35 accordingly. The applicants appreciate the careful review of the claims, done by the Examiner, which resulted in this correction.

B. Rejections Under Section 112

The Office Action rejects claims 3, 14, 15, 24, 25, 26, and 34 under 35 U.S.C. § 112, 2d ¶. The Office Action states that the terms "majority" and "substantial" are not defined by these claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The applicants point out that neither of the terms (namely, "majority" and "substantial") is recited in either claim 14 or claim 24, and respectfully request withdrawal of the rejection of these claims without amendment.

Claims 3, 15, 25, 26, and 34 have been amended to eliminate the term "substantial" wherever it occurs, and to replace the phrase "a majority" with the phrase "at least half." Claim 3 has also been amended to eliminate the recitation of "retention of a substantial portion of the impurities in said first solvent"; that limitation is now redundant in light of the amendment to claim 1, from which claim 3 depends. Thus, with the stated rejections having been overcome, allowance of the claims 3, 15, 25, 26, and 34 is respectfully requested.

C. Rejections Under Section 102(e)

The Office Action rejects claims 1-4, 6, and 11 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,498,709 issued to Navia et al. The Office Action states that Navia et al. teach the preparation of sucralose wherein the aqueous alkaline mixture of the crude sucralose (first solvent water) is extracted with toluene (second partially immiscible solvent) to remove impurities. Then a second liquid extraction is performed with 2-butanone (partially immiscible third solvent) which effects the transfer of a majority of sucralose into 2-butanone. The sucralose is recovered from the 2-butanone extracts. The extraction performed is also a batch extraction using toluene and 2-butanone (see col. 11, lines 1-13).

The applicants respectfully point out that the cited art does not teach a method whereby a second portion of the impurities are retained in the first solvent, as recited in amended claim 1. Claim 1 has been rewritten for clarity, highlighting the differences between the claimed invention and the cited art already present in original claim 1. The amendments do not narrow the scope of the claim, however, nor do the applicants believe that the amendments are necessary to distinguish the claimed invention from the cited reference.

As amended, claim 1 recites that first impurities present in the composition are extracted into the second solvent, and that second impurities are still retained in the first solvent even after extraction with the third solvent. Support for the amendment may be found in the specification at paragraph [0036] and in Example 1, as well as elsewhere throughout the specification. The amendment does not change the scope of claim 1, and is submitted with the hope of clarifying the meaning of the claim.

The '709 patent teaches an aqueous mixture containing sucralose being extracted with two different solvents, namely toluene and 2-butanone. The first extraction is stated at column 11, lines 6-7, to remove nonpolar impurities. The second extraction extracts sucralose, as noted at column 11, lines 12-14. The cited reference does not teach the retention of impurities in the first solvent, however, as recited in amended claim 1. Rather, as will be understood by the skilled artisan, the multiple extractions with 2-butanone (column 11, lines 7-8) are not suitable for achieving the purposes of limitation (b) of claim 1.

The applicants urge that this important distinction be taken into consideration. The cited reference teaches that the extraction with toluene removes a portion of the impurities, namely nonpolar impurities, but it does not state that all of the impurities are also removed by this step. Indeed, as is known in the art, toluene is not expected to remove all impurities, and would for example leave polar impurities behind. The skilled artisan would expect that some of the impurities present in the first solvent would remain after extraction with toluene. The repeated extraction of this composition with the more polar 2-butanone would be expected by the skilled artisan to carry impurities not removed by the toluene extraction process along into the extracted sucralose. Such a result is counter to the purposes of the present invention, whose purpose is to separate these impurities from the sucralose. Thus, there is no teaching of retention of impurities in the first solvent, as recited in limitation (b) of amended claim 1, and therefore the '709 patent fails to anticipate claim 1. The applicants respectfully request reconsideration and allowance of independent claim 1, as well as claims 3, 4, 6, and 11, which depend from claim 1. Claim 2 has been canceled.

D. Objections to Dependent Claims 5, 7-10, and 12

Point 2 on page 4 of the Office Action under the heading "Conclusion" objects to claims 5, 7-10, and 12 as being dependent upon a rejected base claim, namely, claim 1. The Office Action states that claims 5, 7-10, and 12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The applicants submit that the rejection to claim 1 has now been overcome and, therefore, that the objections to claims 5, 7-10, and 12 are now overcome as well. Reconsideration and early allowance of these dependent claims is respectfully requested.

E. Rejections Under Section 102(b)

The Office Action rejected claims 49-54 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,384,311 issued to Antenucci et al. That rejection is rendered moot, for purposes of the present application, because the applicants have cancelled claims 49-54 without prejudice to the filing of a continuing application including those claims.

F. Conclusion

The rejections under 35 U.S.C. §§ 102, 103, and 112 and the objections should all be withdrawn. Favorable action is earnestly solicited. Finally, the Examiner is invited to call the applicants' undersigned representative if any further action will expedite the prosecution of the application or if the Examiner has any suggestions or questions concerning the application or the present Response. In fact, if the claims of the application are not believed to be in full condition for allowance, for any reason, the applicants respectfully request the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims pursuant to MPEP § 707.07(j) or in making constructive suggestions pursuant to MPEP § 706.03 so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,

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